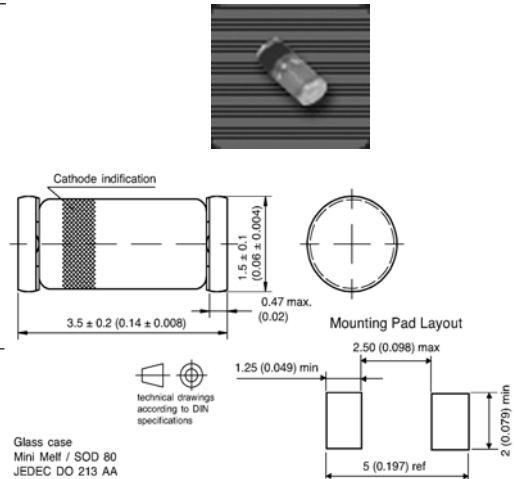


## Features

- ◆ For general purpose applications
- ◆ The LL103A, B, C series is a metal-on-silicon Schottky barrier device which is protected by a PN junction guard ring.
- ◆ The low forward voltage drop and fast switching make it ideal for protection of MOS devices, steering, biasing and coupling diodes for fast switching and low logic level applications. Other applications are click suppression, efficient full wave bridges in telephone subnets, and blocking diodes in rechargeable low voltage battery systems.
- ◆ These diodes are also available in the DO-35 case with type designations SD103A thru SD103C.

## Mechanical Data

- ◆ Case: MiniMELF Glass Case (SOD-80)
- ◆ Weight: approx. 0.05g
- ◆ Cathode Band Color: Green



## Maximum Ratings and Thermal Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	Value	Unit	
Peak inverse voltage	LL103A LL103B LL103C	$V_{RRM}$	40 30 20	Volts
Power dissipation (Infinite heatsink) $T_c=3/8"$ from body derates at 4mW/°C to 0 at 125°C	$P_{tot}$	400 <sup>(1)</sup>	mW	
Single cycle surge 60-Hz sine wave	$I_{FSM}$	15	Amps	
Junction temperature	$T_j$	125	°C	
Storage temperature range	$T_s$	-55 to +150	°C	

## Electrical Characteristics

( $T_j=25^\circ\text{C}$  unless otherwise noted.)

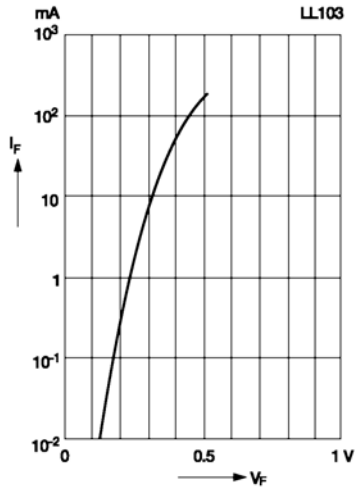
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Leakage current	LL103A LL103B LL103C	$V_R=30\text{V}$ $V_R=20\text{V}$ $V_R=10\text{V}$	-	-	5	$\mu\text{A}$
Forward voltage drop	$V_F$	$I_F=20\text{mA}$ $I_F=200\text{mA}$	-	-	0.37 0.6	Volt
Junction capacitance	$C_{tot}$	$V_R=0\text{V}$ , $f=1\text{MHz}$	-	50	-	pF
Reverse recovery time	$t_{rr}$	$I_F=I_{Rc}=50\text{mA}$ to 200mA, recover to $0.1I_R$	-	-	10	ns

**Notes:** 1. Valid provided that electrodes are kept at ambient temperature.

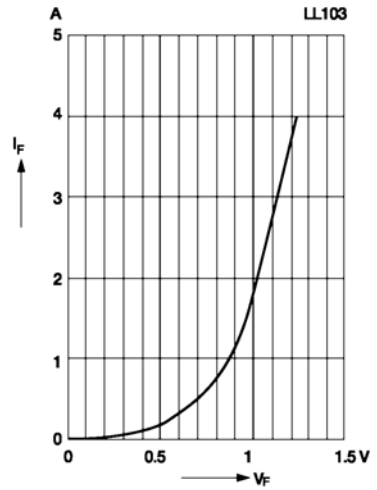
# RATINGS AND CHARACTERISTIC CURVES

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

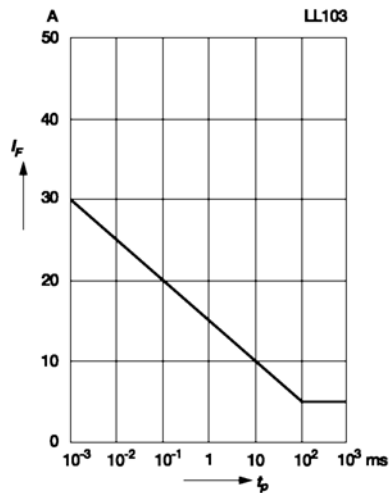
**Typical variation of fwd. current vs. fwd. voltage for primary conduction through the Schottky barrier**



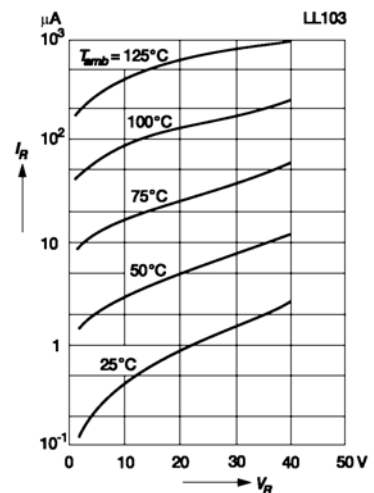
**Typical high current forward conduction curve**  
 $t_p = 300$  ms, duty cycle = 2%



**Typical non repetitive forward surge current versus pulse width**  
Rectangular pulse



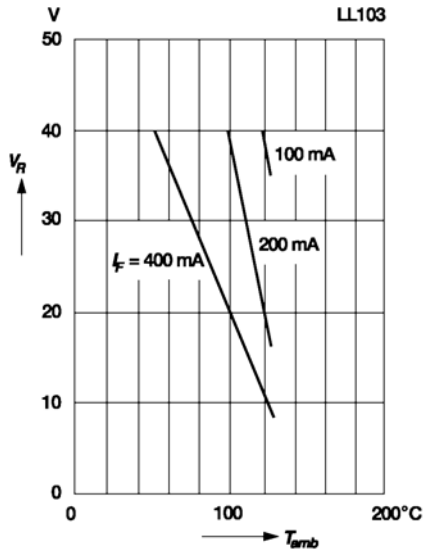
**Typical variation of reverse current at various temperatures**



# RATINGS AND CHARACTERISTIC CURVES

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

**Blocking voltage deration  
versus temperature at various  
average forward currents**



**Typical capacitance  
versus reverse voltage**

